USGS

WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2002CO6B

Title: Evaluating Strategies to Mitigate Waterlogging and Salinization in Colorado's Lower Arkansas River Valley

Project Type: Research

Focus Categories: Water Quality, Groundwater, Agriculture

Keywords: Salinity, Saline soils, Drainage, Water quality, Groundwater quality, Groundwater modeling, Surface water modeling, Decisionmaking

Start Date: 03/01/2002

End Date: 02/28/2003

Federal Funds Requested: $16,618

Non-Federal Matching Funds Requested: $33,236

Congressional District: 4th

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Abstract

The research proposed herein focuses on one of the most salinity-affected irrigated regions in the United States, the Lower Arkansas River Basin in Colorado. If agricultural production is to be sustained, well-designed and economical changes must be made in fields and subregions along the entire Lower Arkansas Valley. Old irrigation habits will have to be altered to become more efficient, aging water-delivery infrastructure will need to be rehabilitated and modernized, subsurface drainage systems must be installed and maintained, and new and more salt-tolerant crop varieties will need to be adopted. This proposal presents an approach that builds upon ongoing studies to apply and refine sound modeling tools, rooted in and calibrated by extensive field data, and founded upon strong working relationships with numerous agencies and with over 80 valley farmers. The goal is to build a framework for evaluating strategies to support a productive irrigated agriculture in a salinity-threatened valley.